

Date: Wednesday, 11/03/2009 9:53:18 AM
 User: Chantal Lavoie

Process Sheet

SPLIT-1

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : SADDLE BILLET
Job Number : 46411 - 1	
Estimate Number : 10034	
P.O. Number :	Part Number : D6101005
This Issue : 11/03/2009 S.O. No. :	Drawing Number : D6101 REV A
Prsht Rev. : NC	Project Number : N/A
First Issue : 1 / 1 Type : PURCHASED PARTS	Drawing Revision : A
Previous Run : 34874	Material :
Written By :	Due Date : 18/09/2009 Qty: 300 Um: Each
Checked & Approved By : <u>C209103111</u>	
Comment : Est. A: 01.05.04 New Issue EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	PG	PURCHASING
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Comment: PURCHASING

- Issue P/O: 8393
- a) Description: Alluminum billet
- b) 5.00" x 8.250" x 2.50" thick
- c) Tolerance on all dimensions are +0.030"/-0.000"
- d) Grain direction along 5.00" length
- e) Material: 7075-T7351 (QQ-A-250/12)
- f) Material certification required

C209103113

(300)

2.0	D6101005P	7075-T7351 8.25X5.0X2.5
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 300.0000 Each(s)

7075-T7351 8.25X5.0X2.5

3.0	PACKAGING 1	PACKAGING RESOURCE #1
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Comment: PACKAGING RESOURCE #1

- Receive & Inspect For Transit Damage
- Ensure material certification is attached

50

J8 09104102

4.0	QC6	DIMENSIONAL CHECK
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Comment: DIMENSIONAL CHECK

Ensure Material certification comply to Dwg D6101

SA 09104102

(50)

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 11/03/2009 9:53:18 AM
User: Chantal Lavoie

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SADDLE BILLET

Job Number: 46411

Part Number: D6101005

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: *CWC*

SA 09/04/02

6.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

09/04/03

Job Completion



C209/04/03

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

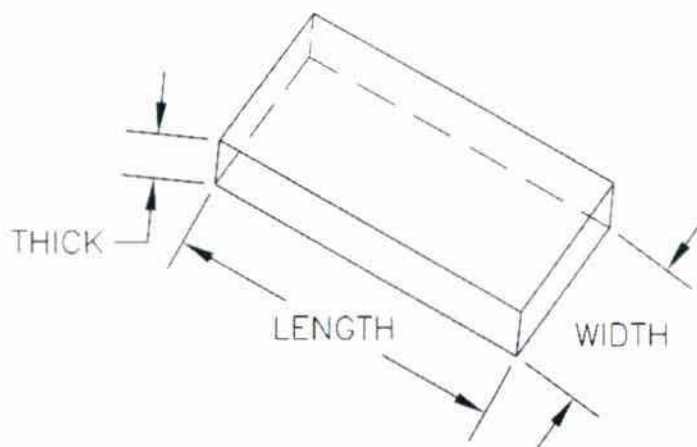
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>A</i>	APPROVED <i>AS</i>	DRAWING NO. D6101	Rev. A SHEET 1 OF 1
DATE 01.03.30		TITLE SADDLE BILLET, 7075	SCALE NTS
A	01.03.30	NEW ISSUE	

SPECIFICATION CONTROL DRAWING



RELEASED
01.04.23

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 46411

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length

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**Castle Metals®**

A. M. Castle & Co.

BORDEREAU DE MARCHANDISES

Page 1 of 1

No de Formulaire d'Emballage / Pack Slip No:2341873

Expédié de / Ship From:		Vendu à / Sold To:		Expédié à / Ship To:		Livré à / Deliver To:	
Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date d'expédition / Date Shipped	F.O.B.	Modalités de transport / Freight Terms		Transporteur / Carrier	N° du Bon de connaissance / BOL No	N° de livraison / Delivery No	
01-APR-09	ORIGIN	Prepaid		MANITOULIN	4879-2	2341873	

Détails d'expédition / Shipment Details	Destination finale / Final Destination Branch - MON
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N° de commande / Order No	N° de ligne Line No	N° d'article / Item No	Description			
181577	1	6879.MO	2.5000.PL.7075.T7351.ALUMINUM.48.5000.144.5000 CUT 2SIDED TO 8.25 IN () X 5 IN ()			
N° de bon de commande / Purchase Order No		Nbre de pièces / Part Number	Qté commandée / Ordered Qty	Qté Facturée / Invoice Qty	Solde à livrer / Backorder Qty	
Error 8393			50 PCS	50 PCS		
Détails / Details						
Usine / Mill	No de coulée / Heat Number	Code méc / Mech Id	Pièces / PCS	Largeur (Pouce)/ Width (IN)	Longueur (Pouce)/ Length (IN)	Qté expédiée/ Shipped Qty (LBS)
	422797A1		50			520.88

Ces marchandises/technologies sont sujettes aux règlements de l'Export Administration et du département d'état des États-Unis. Si elles ont été/sont exportées, elles doivent se conformer à ces règlements. Toute modification du contrat de transport contraire aux lois des États-Unis est interdite.

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

Nous certifions par la présente que le matériel couvert par cette certification est conforme aux spécifications susmentionnées et aux exigences applicables pour le matériel, y compris toute spécification faisant partie de la description. Les rapports d'essai sont archivés pour fins de consultation. Toute requête concernant du matériel défectueux sera rejetée à moins qu'elle ne soit faite par écrit à A. M. Castle & Co. dans les 60 jours suivant la livraison. Le matériel coupé sur mesure ou coupé par le client ne peut être retourné pour crédit.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Ce matériel a été reçu et inspecté par
This material has been received and inspected by:

Date:

SHIP TO:

CASTLE METALS
C/O CUTTER PRECISION METALS
1208 NO. 4TH AVE
KENT, WA 98032

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number

4128061

SOLD TO:

AM CASTLE & CO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

CUSTOMER PO NUMBER: 45-24870		WORK PACKAGE:		CUSTOMER PART NUMBER: 6879 A97075-60			SHIP RUN/LOAD ID: 101272/3		GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1066098	LINE ITEM: 1	SHIP DATE: 28-APR-2008		ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: MILL FINISH PLATE			
WEIGHT SHIPPED: 7214 LB	QUANTITY: 4 PCS EST.		B/L NUMBER: 2017533		GAUGE: 2.5000 IN		WIDTH: 48.500 IN		LENGTH: 144.500 IN	

Certified Specifications

AMS 4078/RevG
ASTM B 209/Rev07
BSS 7055/RevA
DPS 4.713/RevAH
GSS16100/RevG

AMS-QQ-A-250/12
ASTM B 594/Rev08
CMMP 025/RevR
EAC MS1011/RevE
MMS 159/RevN

AMS-STD-2154
BAC 5439/RevH
CSTI 006/RevC
GAMPS 9101/RevB
PS 21211/RevK

Test Code: 4297

Test Results

Lot: 422797A1 Cast 161

Drop 21

Ingot 2

(ASTM E8/B557)

Tensile:	Temper	Dir / # Tests	Ultimate KSI (MPA)	Yield KSI (MPA)	Elongation %
	T7351	LT / 2 (Min:Max)	70.8 : 71.0 (488 : 490)	60.2 : 60.8 (415 : 418)	9.7 : 10.4

(ASTM E1004)

Conductivity %IACS :	41.4 Min	41.6 Max
(MS/M) :	24.0 Min	24.1 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.10	0.22	1.5	0.02	2.4	0.19	5.6	0.02	0.01	0.01	TOT 0.03

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4128061

Lot: 422799A7 Cast 161

Drop 29

Ingot 2

(ASTM E8/B557)

Tensile: Temper
T7351

Dir / # Tests
LT / 2 (Min:Max)

Ultimate KSI (MPa)
70.2 : 72.5
(484 : 500)

Yield KSI (MPa)
58.1 : 61.4
(401 : 423)

Elongation %
9.8 : 10.0

(ASTM E1004)

Conductivity %IACS :
(MS/M) :

40.5 Min
23.5 Min

40.9 Max
23.7 Max

(ASTM E1251)

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER
Actual	0.09	0.20	1.6	0.02	2.7	0.19	5.7	0.02	0.01	0.01	TOT 0.03

ALLOY LIMITS

Chemistry:	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	EACH	0.05
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05	TOT	0.15

Aluminum Remainder

TEST NOTES

Metal represented by this test report was immersion
ultrasonically tested from one side and meets the Class A
and Class B requirements of all specifications referenced
on this test report.

CASTLE METALS - KENT	
DATE REC'D <u>5-2-08</u>	CUST. _____
REC'D FROM <u>Kaiser</u>	CUST. P.O. _____
APPROVED BY <u>AM</u>	AMC S/O _____
TR # <u>422799A1/422799A7</u>	
WE HEREBY CERTIFY THAT THESE ARE CORRECT	
COPIES OF REPORTS NOW ON FILE AT A.M. CASTLE & CO.	
BY: _____	<u>Inc: 6879</u>

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE U.S.A OR CANADA AND MANUFACTURED IN THE U.S.A. AND HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT-TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS ARE ON FILE, SUBJECT TO EXAMINATION. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULANT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. ISO-9001:2000 CERTIFIED

BILL POYNOR, LABORATORIES SUPERVISOR

Bill Poy

